

Why & How We Recycle Steel



*David Keeling
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03/13/06



The New Steel

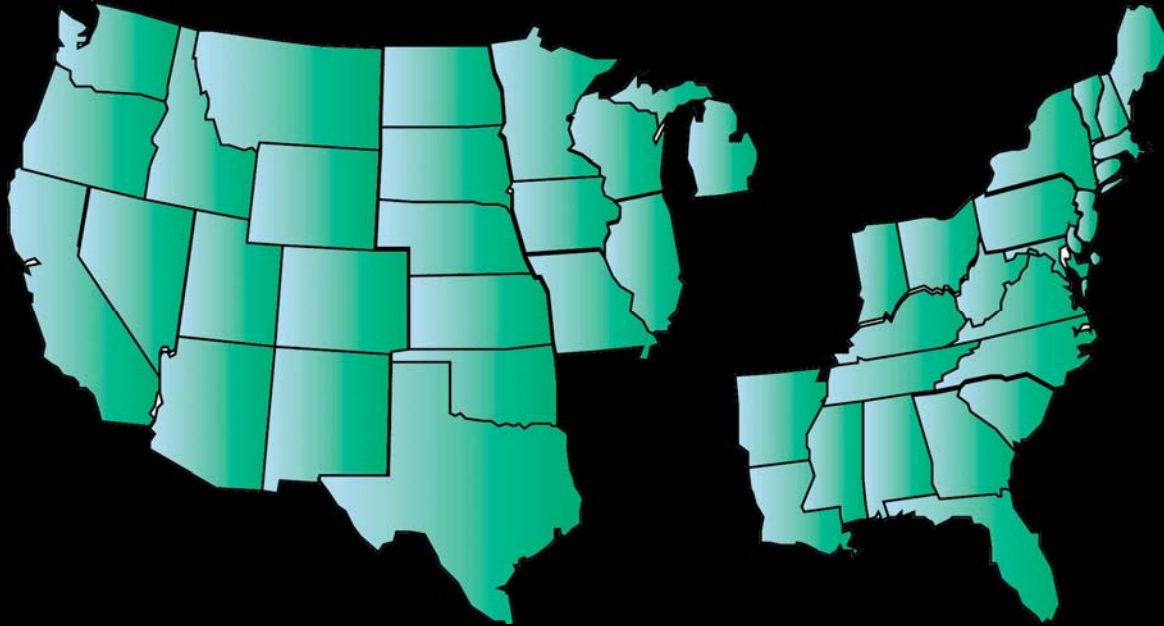


Steel Recycling Institute Founded in 1988



Recycling Institute

Steel Recycling Institute Regional Organization



NATIONAL

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WESTERN REGION

AK,AZ,CA,CO,HI ID,IL,IA,KS,MI,MN,MO,MT
NE,ND,NM,NV,OK,OR,SD,TX WA,WI,WY

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EASTERN REGION

AL,AR,CT,DE,FL,GA,IN,KY,LA ME,MA,MD,MS,
NC,NH,NJ,NY,OH,PA,RI,SC,TN,VA,VT,DC,WV

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WHY DO WE RECYCLE?

- Economics - saves money
- Environment - conserves resources
 - Energy
 - Water
 - Other natural resources
- Saves landfill space

WHY DO WE RECYCLE STEEL?

- Economics - saves money - substitution cost
- Environment - conserves resources
 - Energy: 5450 BTU saved per lb. Of steel
 - Saves per ton of steel
 - Coal - 1,400 lbs
 - Iron ore - 2,500 lbs
 - Limestone - 120 lbs
- Saves landfill space
 - 1 cubic yard whole steel cans = 150 lbs
 - 1 cubic yard flattened steel cans = 850 lbs



RECYCLING SAVES MONEY?

- Costs
 - Collection
 - Processing
 - Transportation
 - Mill operation
- REVENUE - sale of material
- SAVINGS - landfill avoidance
- BUSINESS - profit/loss
- GOVERNMENT - under/over budget

Who Are the Recyclers?

- Gatherer/accumulator - donor/seller
- Collector - curbside operator/hauler
- Processor - MRF operator/scrap dealer
- Melter - mill operator

WHAT ARE THE RECYCLING OPTIONS?

- Residential
 - Curbside
 - Drop-off
 - Buy-back
 - Deposit
 - Waste-to-energy
- Commercial
 - Scrap dealer
 - Business/government
 - Industrial
 - Construction & demolition
 - Waste-to-energy

STEEL SCRAP FLOWS

- “Home scrap” (pre-industrial) -
Excess steel product at mill
- “Prompt” scrap (post-industrial) -
Remnant steel from manufacturing
- “Obsolete” scrap (post-consumer) -
Steel products at end of useful life

Steel Recycling Achievement In 2004



- Overall Steel Recycling Rate Was 70.7%
- 70 Million Tons of Steel Were Recycled
- Old Steel becomes New Steel . . .
- New Steel becomes Old Steel . . .

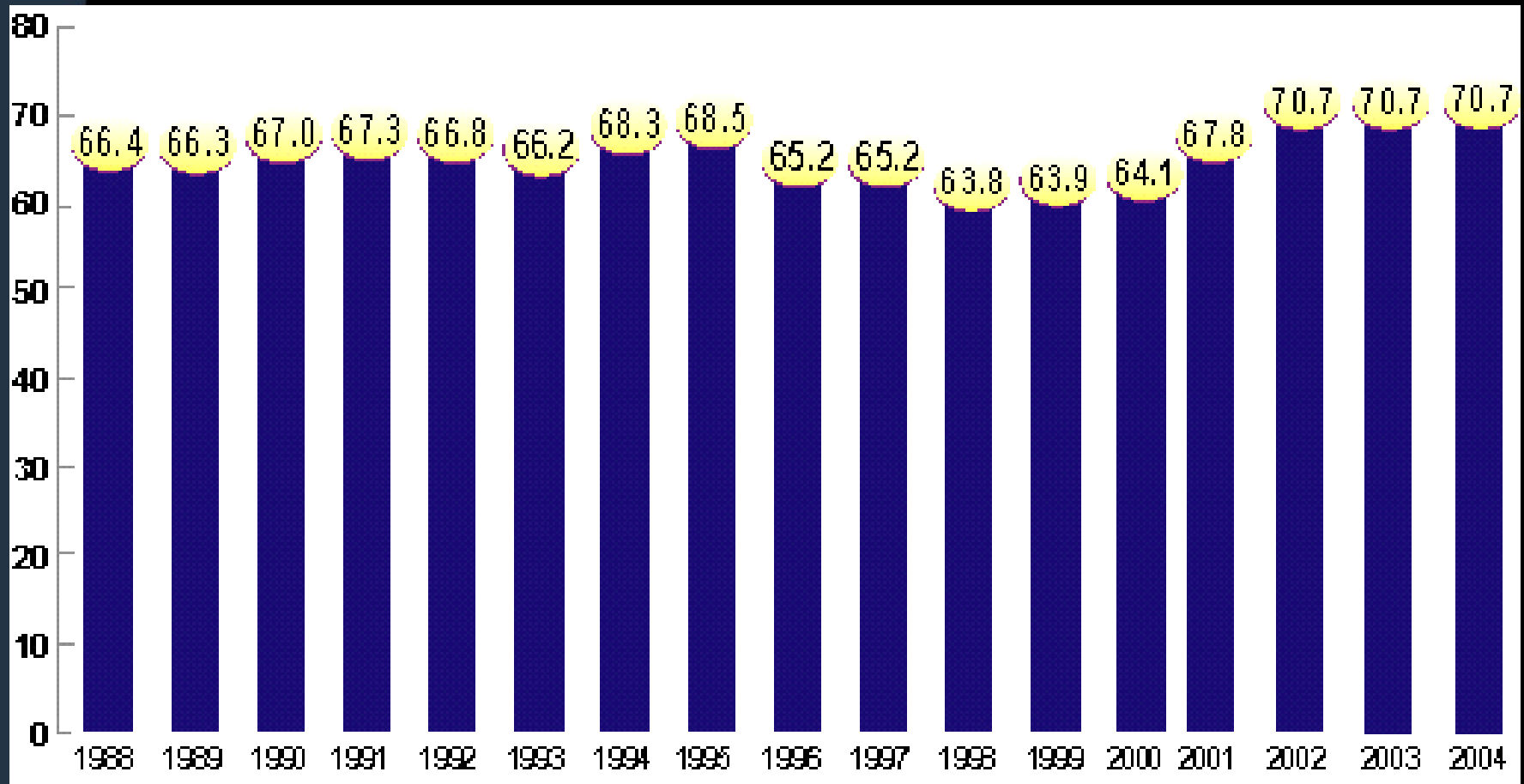


Steel Products – A Living Scrap Inventory

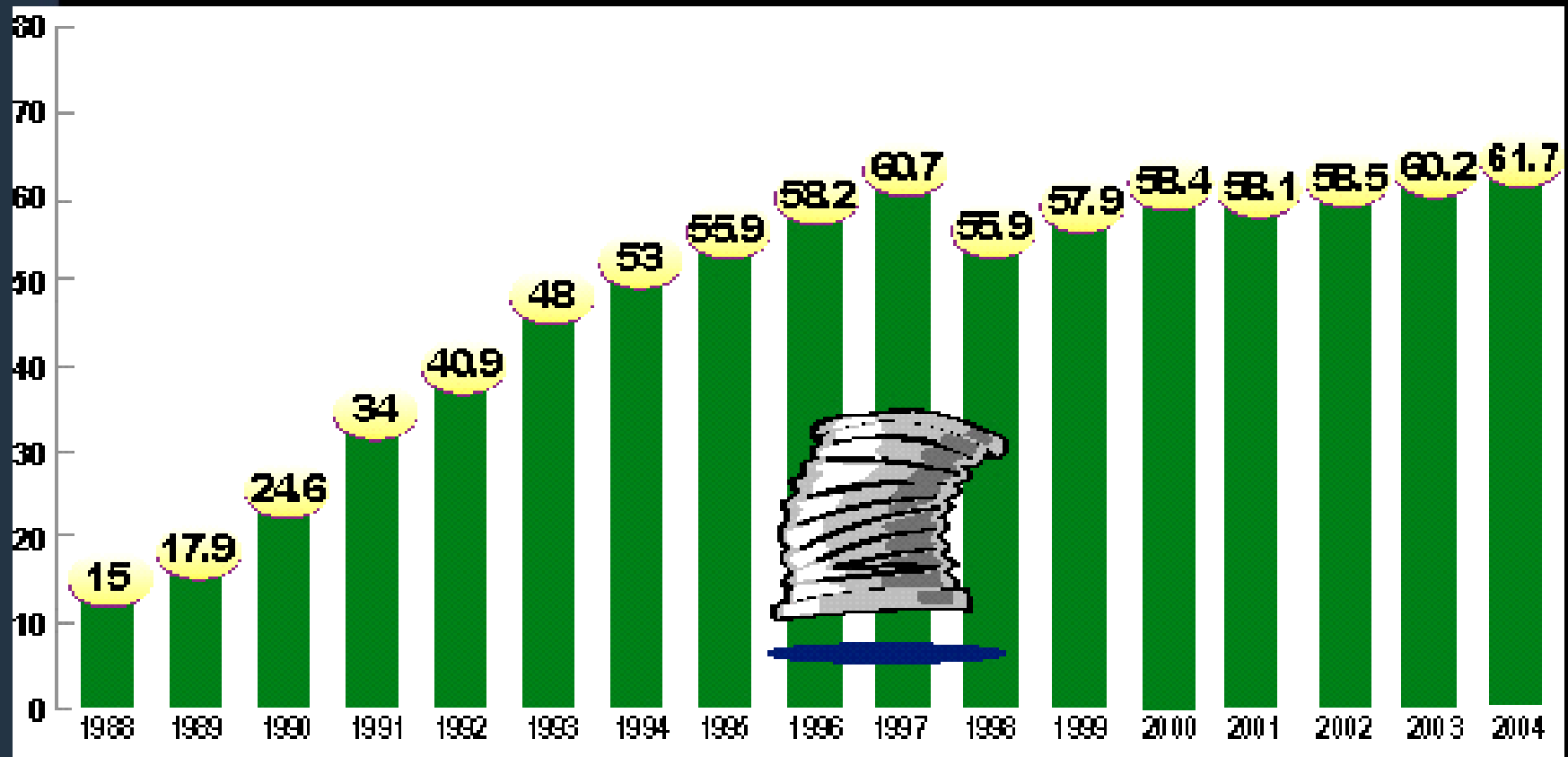
- Cans - 1 Year or Less
- Autos - 12 Years
- Appliances - 18 Years
- Construction - 50-100 Years or More



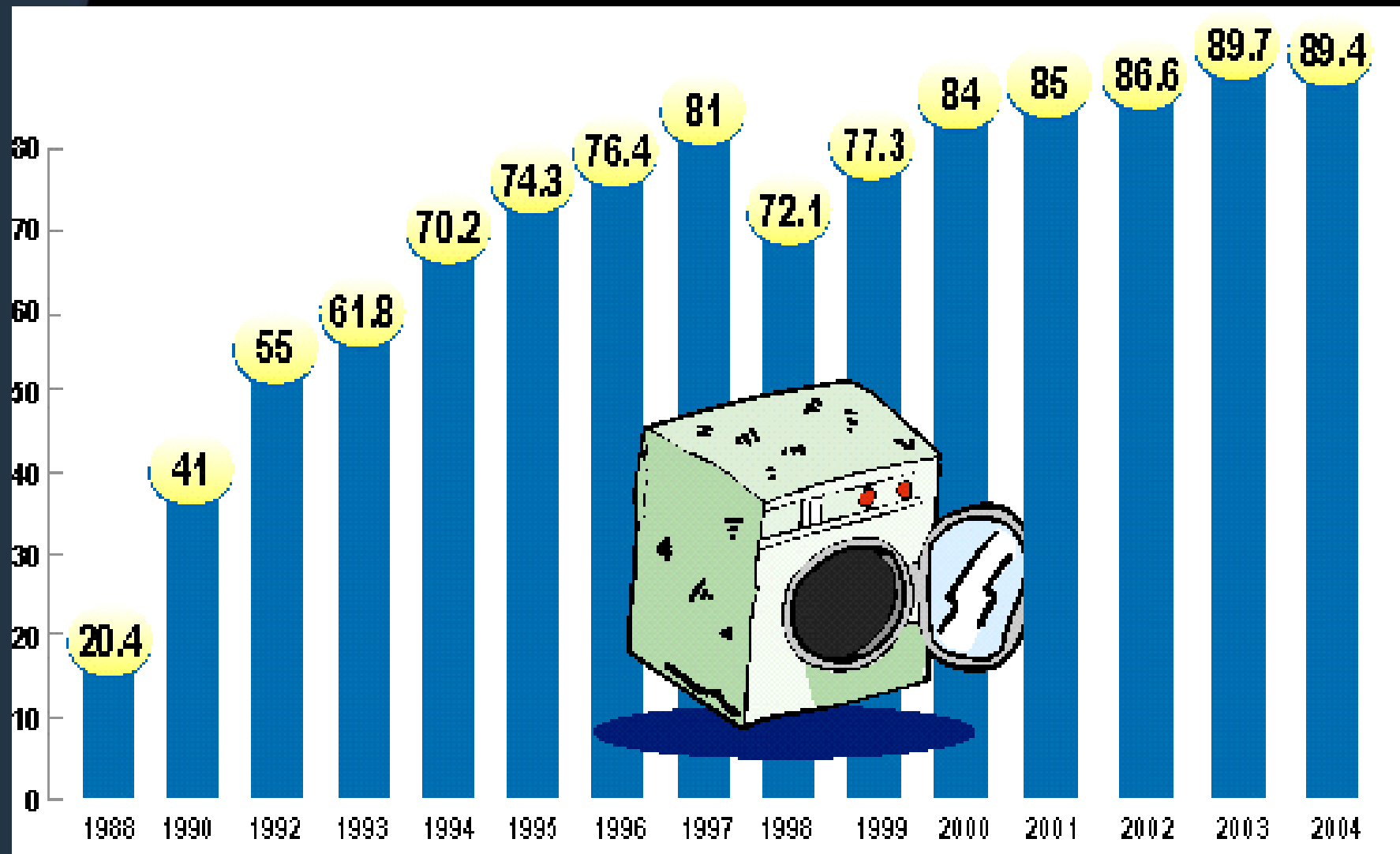
Overall Steel Recycling Rate



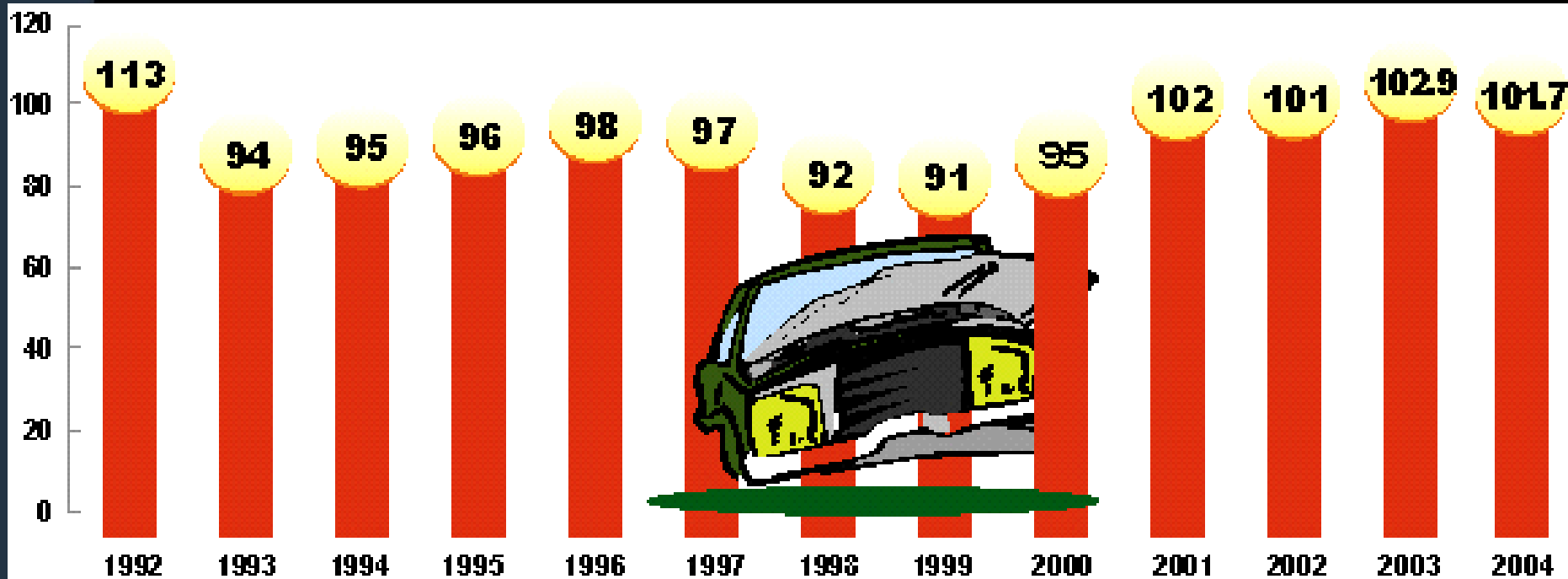
Steel Can Recycling Rate



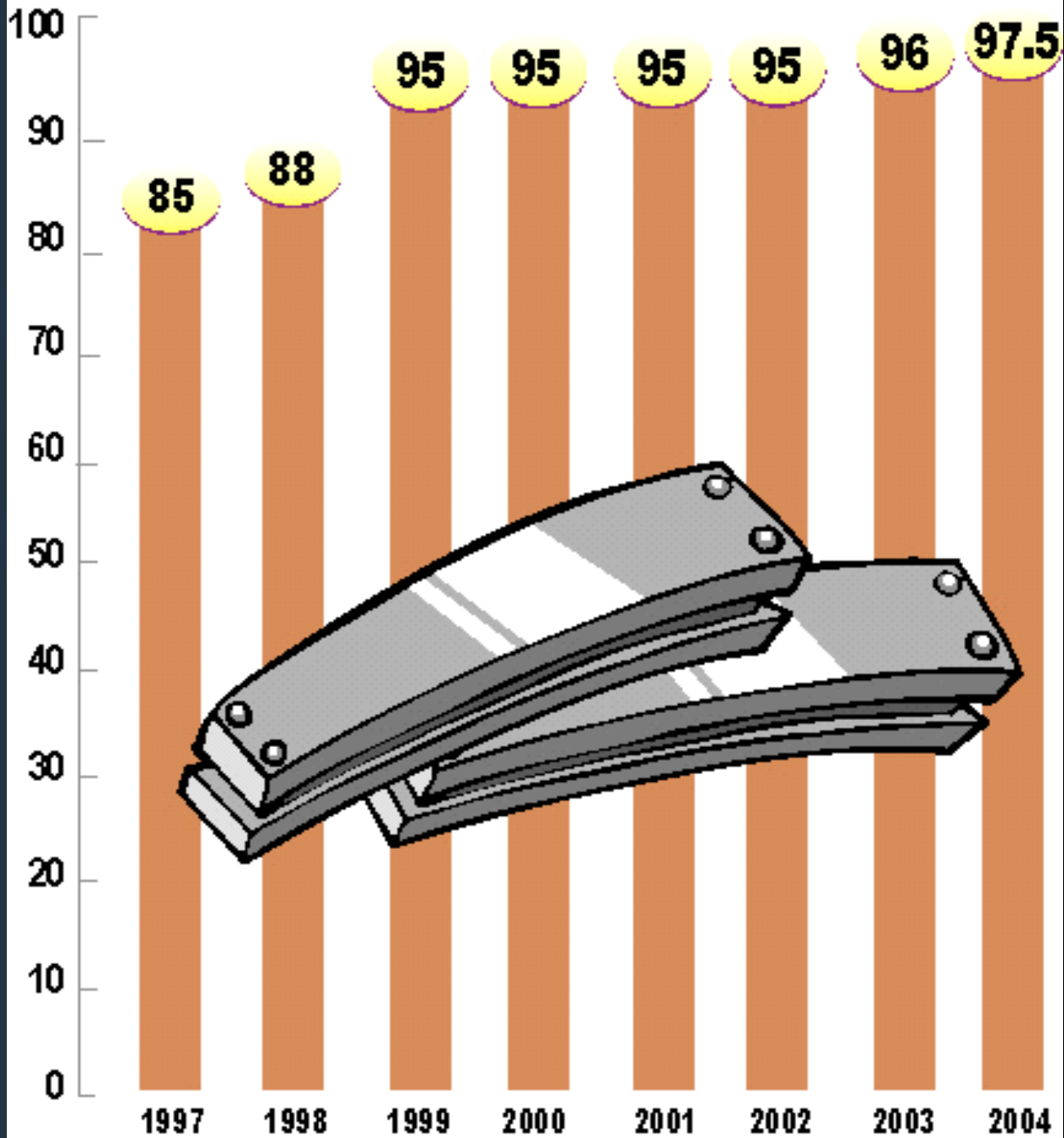
Appliance Recycling Rate



Automotive Recycling Rate

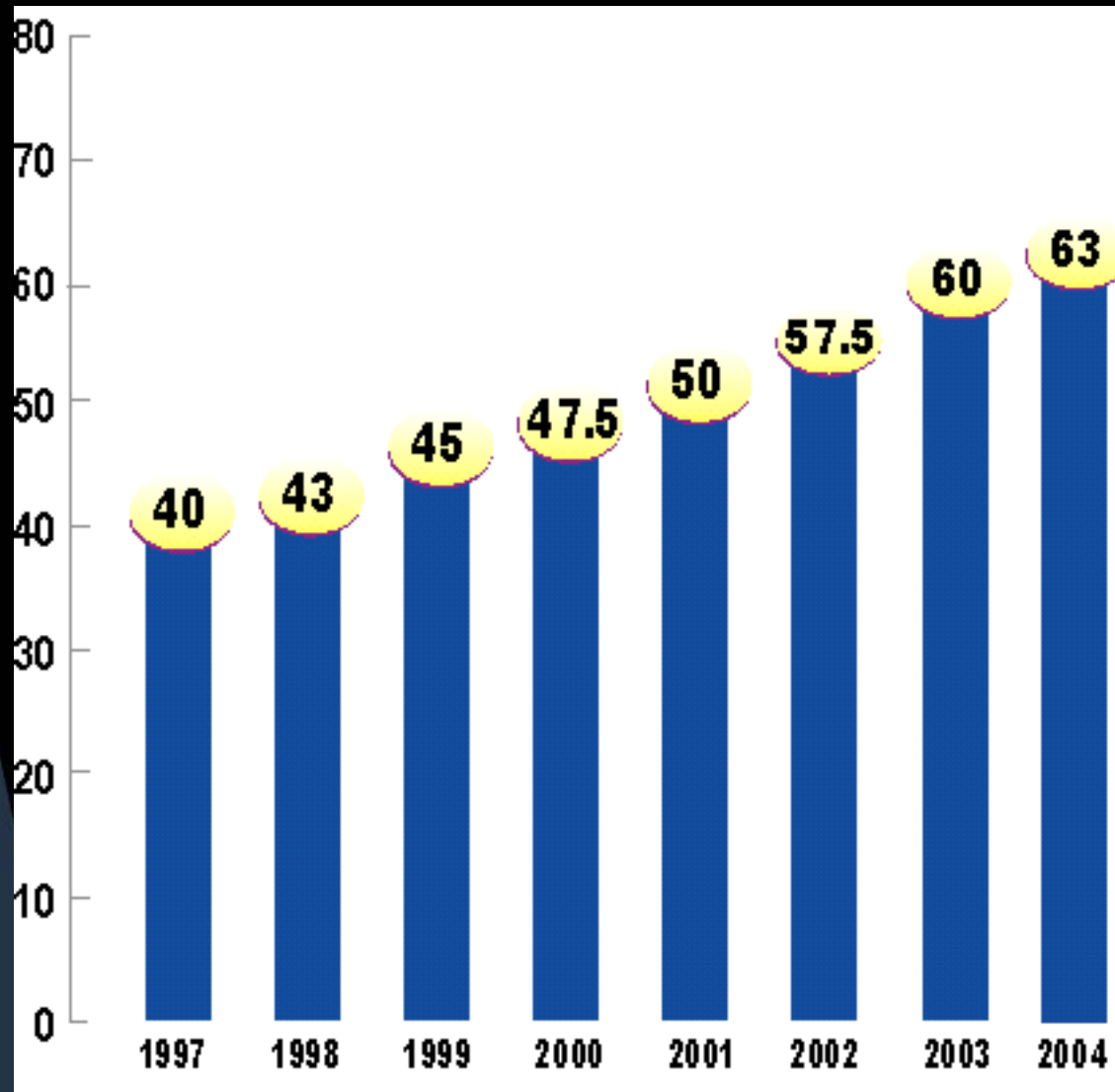


CONSTRUCTION



THE **EnviroMetal**

Construction Reinforcement Bar



A Partnership in Steel Making

- Basic Oxygen Furnace -
25% Recycled Content
- Electric Arc Furnace -
100% Recycled Content



A Complementary Partnership in Steel Making,
Infusing New Iron Units and Consuming Scrap

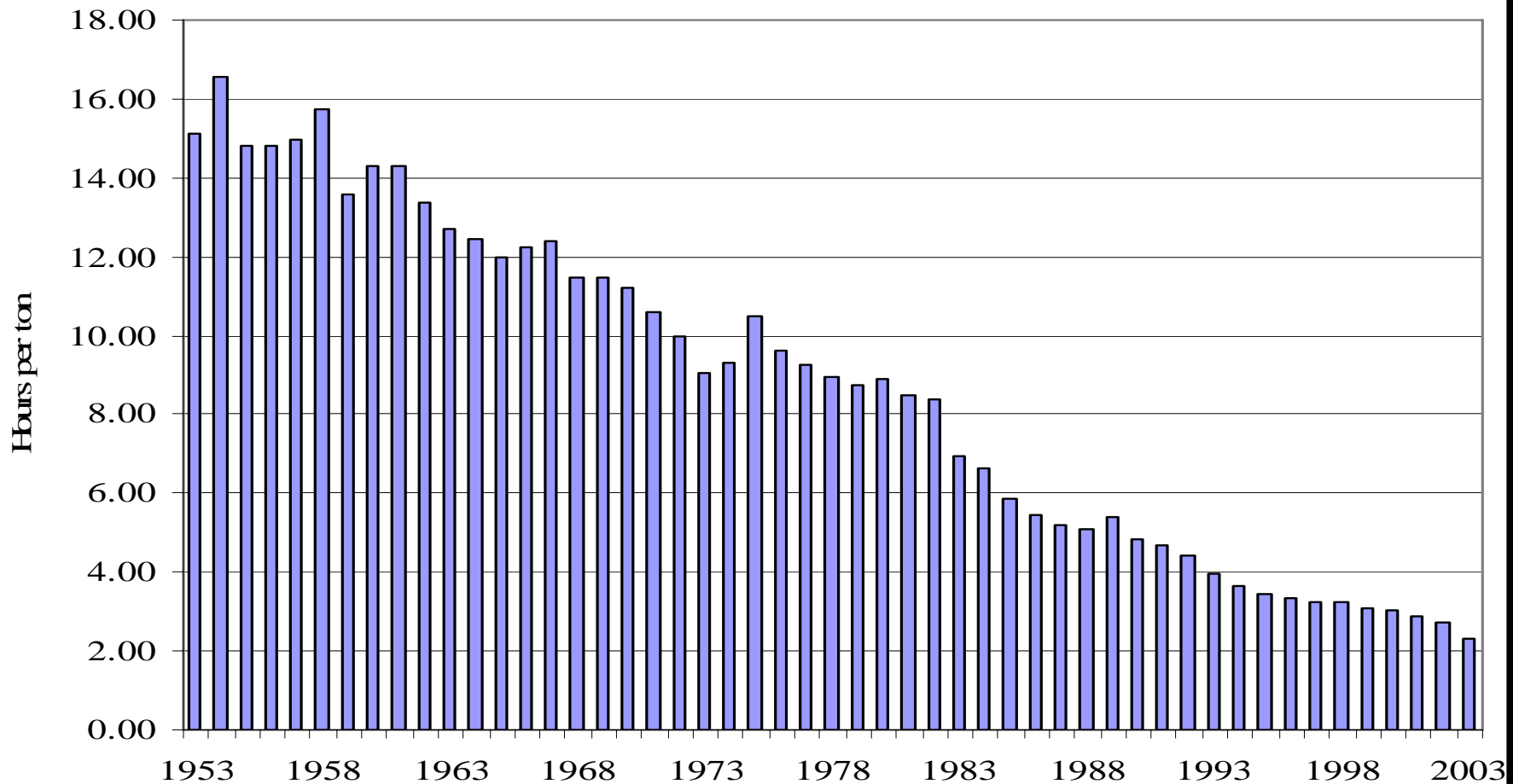
Basic Oxygen Furnace

- Average minimum of 25% recycled content
 - Flat rolled products
 - (Can sheet, car sheet, appliance sheet)
 - Property of formability

Electric Arc Furnace

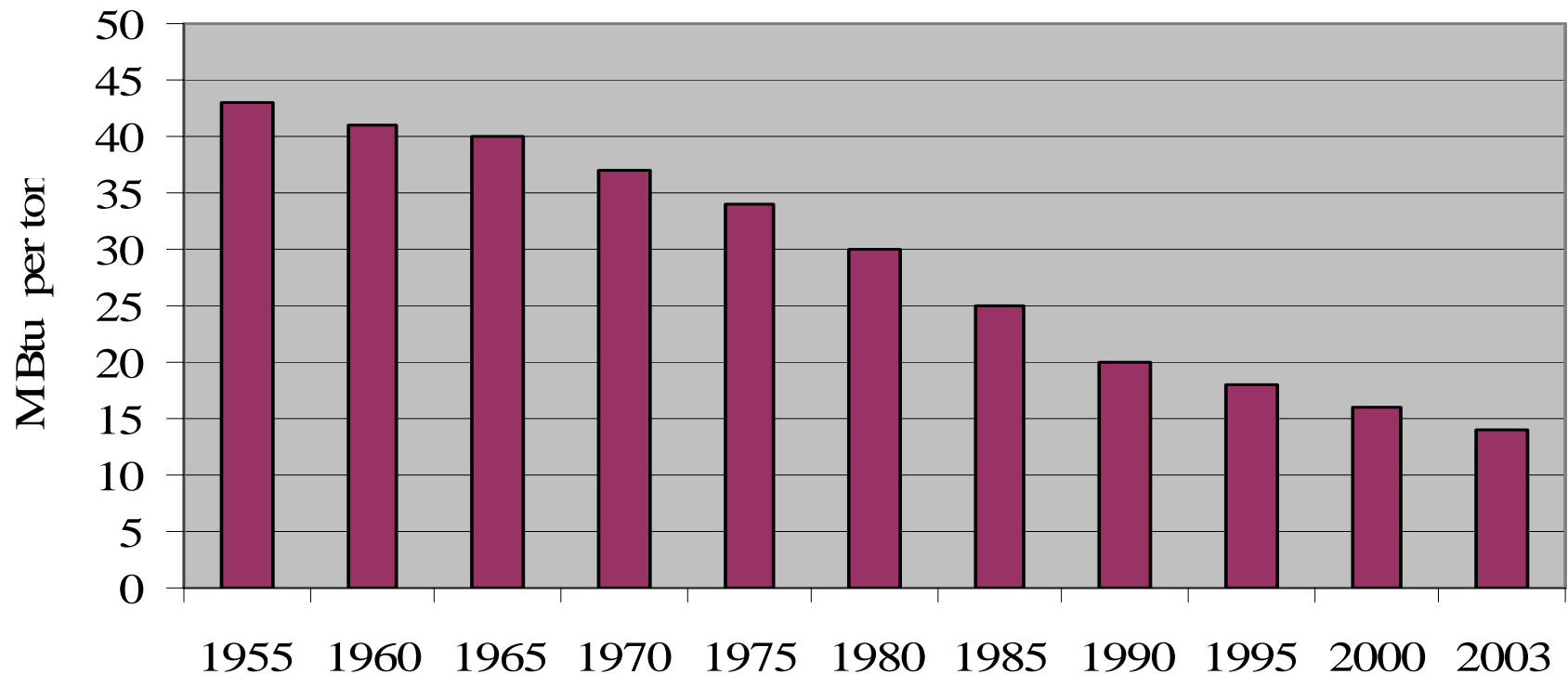
- Virtual 100% recycled content
- Long or heavy shapes
 - (I-beams, angle iron, rebar, nails)
- Property of strength

Productivity measured by worker hours per ton

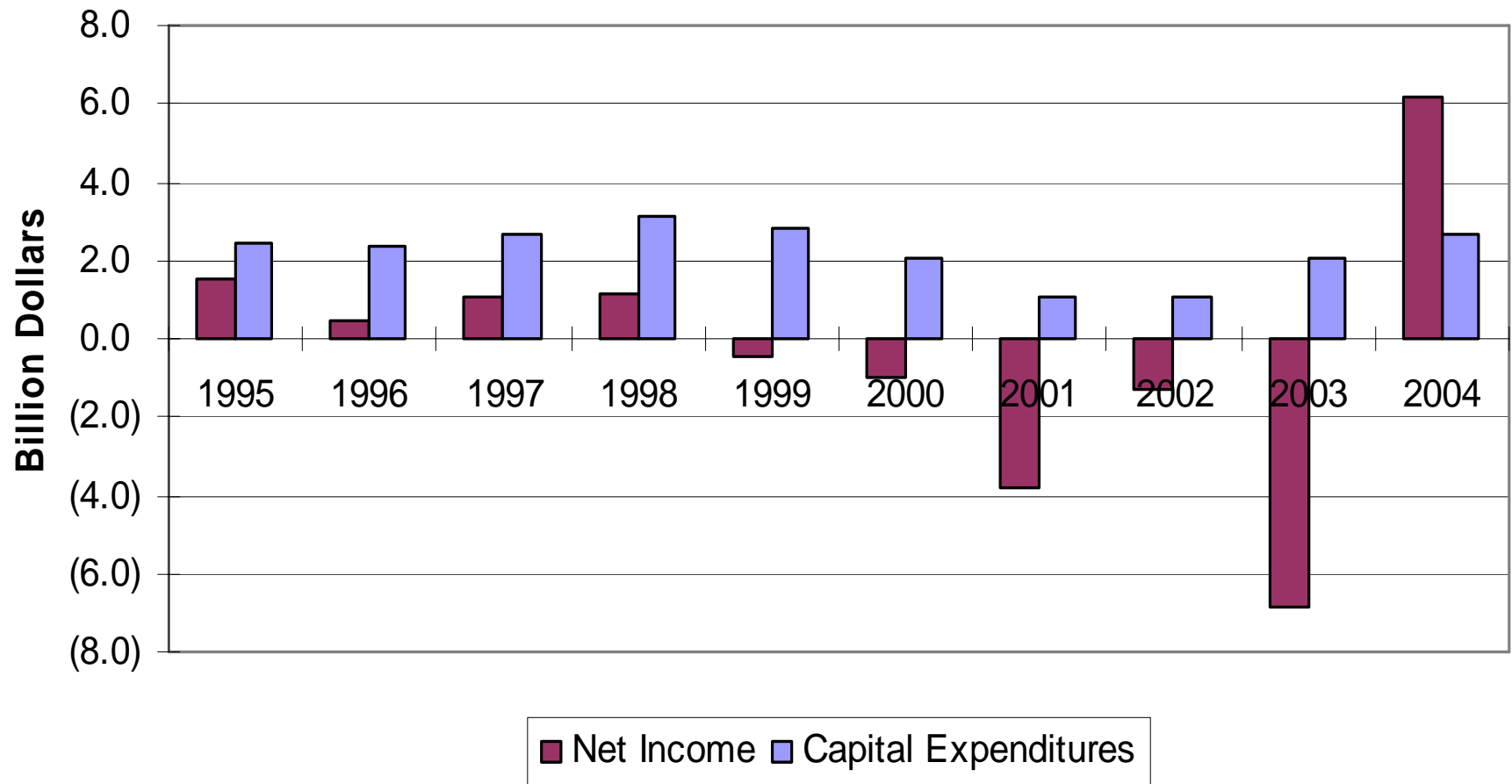


Energy Efficiency is improving

Energy consumption per ton shipped in U.S steel industry



Continuing to Invest in our Future



Future Steel Products Generate Demand For Steel Scrap

- **Ultralight Steel Auto Body**



- **Steel Bridges**



- **Steel Utility Poles**



- **Residential Steel Framing**

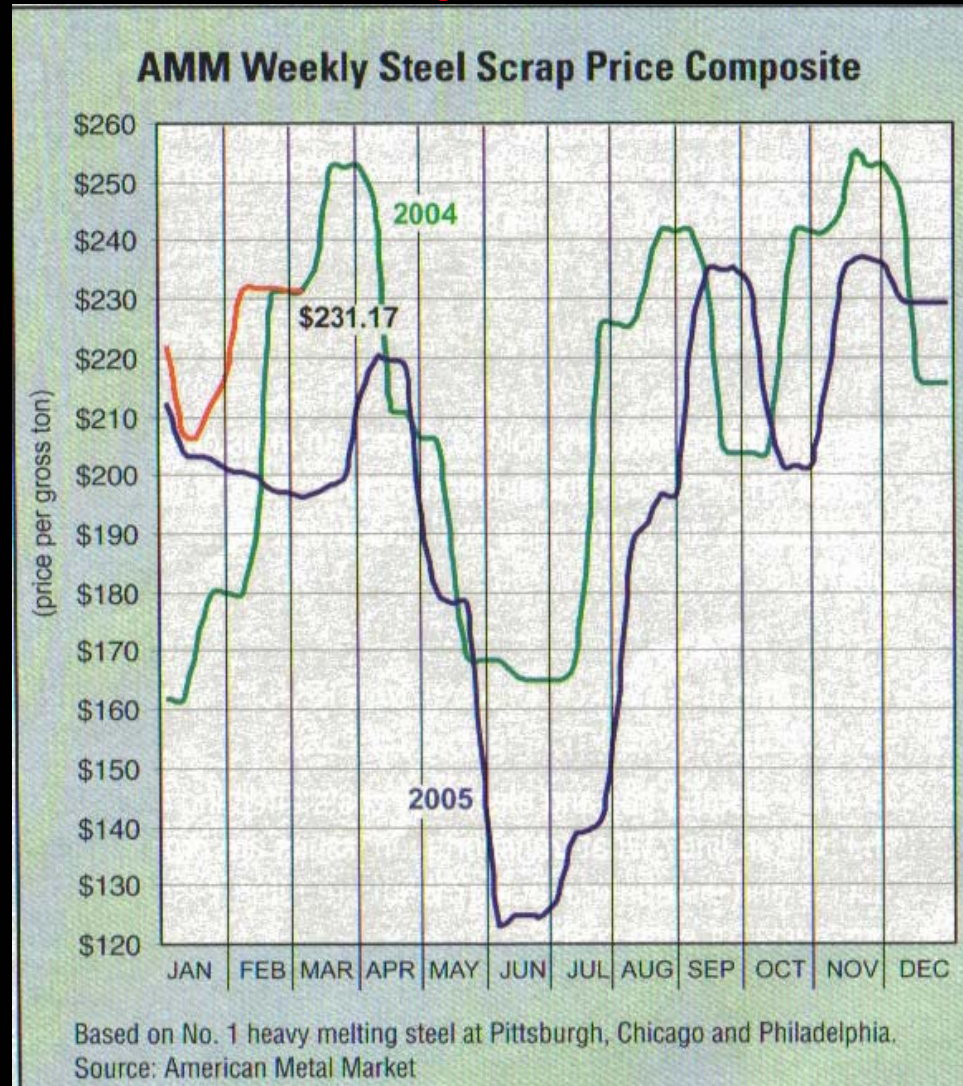


Steel Scrap Trends

Domestic supply and demand

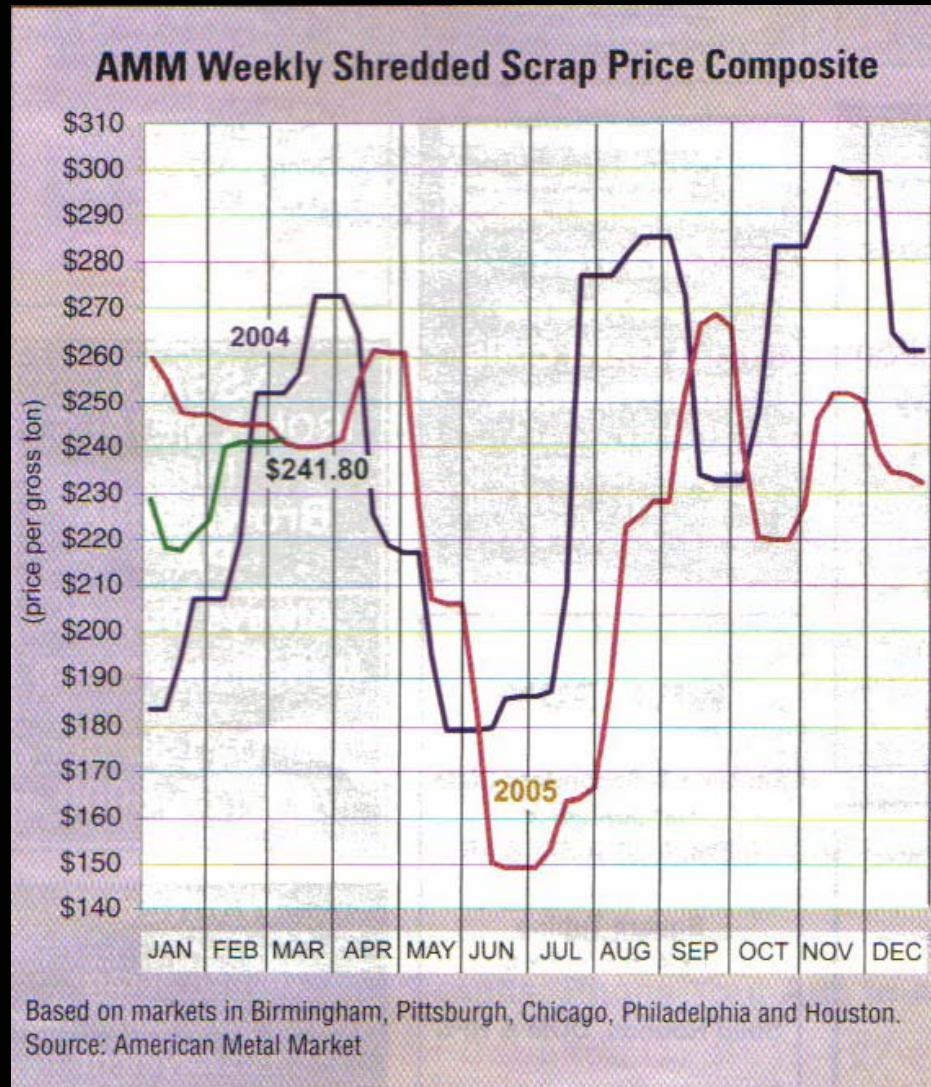
- International supply and demand
- World excess capacity for steel
- Weak U.S. Dollar
- Import dumping into U.S.
- U.S. Economy
- World economy

AMM Weekly Steel Scrap Price Composite



03/13/06

AMM Weekly Shredded Scrap Price Composite



03/13/06

Ferrous Scrap Dealers

- Years of steel recycling experience
- Convenient locations
- Container and transportation capabilities
- Complete processing equipment
- Strong relationships with end markets





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